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(H1)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/477,725 01/05/00 MAEDA

H DAIN-540

EXAMINER

IM22/0620

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ALEXANDRIA VA 22314-2805

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ART UNIT	PAPER NUMBER
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1771

DATE MAILED:

06/20/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/477,725	MAEDA ET AL.	
	Examiner Teresa O'Connor	Art Unit 1771	/

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 05 January 2000.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

- 15) Notice of References Cited (PTO-892)
- 16) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 18) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 19) Notice of Informal Patent Application (PTO-152)
- 20) Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Closs et al. (U.S. 5,429,770).

With respect to Claims 1, 2, 5, 6, 9, 10 and 12 Closs et al. discloses a pair of electrodes, a liquid crystal material filled into a gap between the electrodes, wherein the liquid crystal material has charge-transport properties that vary according to a phase transfer between a plurality of stable liquid crystal phases of the liquid crystal, and wherein the phase transfer upon a change in temperature. Closs et al. utilizes a cell having a pair of ITO electrodes coated onto glass substrates, a gap between electrodes of 10  $\mu\text{m}$ . In addition, Closs et al. discloses that thicknesses of the photoconductive layer preferably range from 1 to 50  $\mu\text{m}$ . Closs et al. demonstrates that two or more

charge-transport properties can be developed in a liquid crystal phase according to the level of thermal energy supplied (see Example 9, Table). See Col. 5, line 44 through Col. 6, line 2; Example 9.

With respect to Claims 3, 4 and 7 the teachings of Closs et al. are the same as relied upon in Claim 1. Closs et al. implies that information is recorded by applying thermal energy by referring to the various uses disclosed, including e.g., a photosensitive switch. See Col. 6, lines 3-17. Use of a laser to provide the thermal energy is also implied and another use recited includes laser printing. See Col. 6, lines 3-5. Although Closs et al. does not explicitly refer to information being read, Closs et al. suggests reading information by measuring the value of a photoelectric current generated by light applied to a thermally treated or conditioned cell of liquid crystal material. See Example 9. It is the Examiner's position that the use limitations merely recite the intended use which holds little patentable weight in the product claims. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

With respect to Claim 8 the teachings of Closs et al. are the same as relied upon in Claim 1. Closs et al. discloses a liquid crystal material having low photoconductivity in a polycrystalline structure and increasing photoconductivity by alignment of the charge-carrier molecules through the application of a thermal treatment. See Col. 1,

line 65 through Col. 2, line 5; Col. 3, lines 30-38; Example 9, Table. Although Closs et al. is silent as to a background state, Closs et al. suggests such a background attributable an initial polycrystalline structure by showing an increase in the photocurrent of the liquid crystalline material upon the application of thermal energy. See Example 9, Table and Col. 10, lines 1-4. When the examiner has reason to believe that functional language asserted to be critical for establishing novelty in claimed subject matter may, in fact be an inherent characteristic of the prior art, the burden of proof is shifted to the applicant to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594. Furthermore, with respect to the manner in which information recording is carried out, as recited in Applicant's claim 8, it is the Examiner's position that the use limitation merely recites the intended use which holds little patentable weight in the product claims. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

With respect to Claim 11 the teachings of Closs et al. are the same as relied upon in Claim 1. Closs et al. discloses a liquid crystal material in a cell having a pair of ITO electrodes coated onto glass substrates, a gap between electrodes of 10  $\mu\text{m}$ . Also, Closs et al. discloses that thicknesses of the photoconductive layer generally have a thickness of from 1 to 100  $\mu\text{m}$  and preferably range from 1 to 50  $\mu\text{m}$  and more preferably from 1 to 30  $\mu\text{m}$ . See Col. 5, lines 44-46. However, Closs et al. does not disclose the thickness relationships (A) and (B) as recited in Applicant's claim. It is the

Examiner's position that the disclosure of Closs et al. provides a thickness of 10  $\mu\text{m}$  or range of thicknesses that inherently possess or satisfy the thickness relationships of (A) and (B). Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa O'Connor whose telephone number is (703) 305-9900. The examiner can normally be reached on Monday-Thursday 7:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (703) 308-1261. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-5885 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

TMO  
tmo  
June 18, 2001

  
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SUPERVISORY PATENT EXAMINER  
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